Montana Fish, Wildlife & Parks

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April 27, 1999

To:

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Representative Toni Hagener, 612 17th ST., Havre, MT 59501
Senator Jon Tester, RR1 Box 709, Big Sandy, MT 59520

Ladies and Gentlemen:

The enclosed Final Environmental Assessment (EA) has been prepared for the Big Sandy Elk Game Farm in Hill County and is submitted for your consideration. The final (EA) closes May 4, 1999. If your have questions, feel free to contact me at (406) 265-6177.

Thank you for your interest.

Sincerely,

Shane Reno

Shane Reno, Game Warden

BIG SANDY ELK GAME FARM APPLICATION
FINAL ENVIRONMENTAL ASSESSMENT

MONTANA ENVIRONMENTAL POLICY ACT (MEPA) PROCESS

Montana Fish, Wildlife & Parks (FWP) is required to perform an environmental analysis in accordance with MEPA for "each proposal for projects, programs, legislation, and other major actions of state government significantly affecting the quality of the human environment" [Administrative Rules of Montana (ARM) 12.2.430]. FWP prepares environmental assessments (EA) to determine whether a project would have a significant effect on the environment. If FWP determines that a project will have a significant impact that cannot be mitigated to a minor impact, the agency will prepare a more detailed environmental impact statement (EIS) before making a decision. If the agency determines that a proposed project will not have a significant impact, or that the impact can be mitigated to minor or none, the agency may make its licensing decision based upon the results of the EA and criteria established under Montana game farm statute Montana Code Annotated (MCA) Title 87, Chapter 4, Part 4.

Mitigation measures may be considered in FWP's analysis as a means to reduce impact(s) of a game farm to a level below significance. FWP may also recommend mitigation measures to reduce impacts that are considered minor.

FWP prepared a Draft EA for the proposed Big Sandy Elk Game Farm which identified no significant impacts from the Proposed Action that could not be mitigated. The Draft EA was released for public review and comment March 29, 1999. Public comments were accepted through April 19, 1999. The Draft EA and this Final EA are hereby approved as the Final EA. This Final EA for the proposed development of the Big Sandy Elk Game Farm contains a summary of the Proposed Action, the affected environment, and potential consequences of the Proposed Action, all of which are described in additional detail in the Draft EA, which is adopted in this Final EA. This document also describes mitigation measures, summarizes public comments, and provides the conclusion of the EA. The preferred alternative is the Proposed Action with two required stipulations, and several recommended mitigation measures.

PROPOSED GAME FARM APPLICATION

FWP received an application on December 8, 1998 from Kim and Cindy Kafka to construct the Big Sandy Elk Game Farm at a site approximately 6 miles southwest of Havre, Hill County, Montana. The Proposed Action consists of placing up to 40 adult elk (cows or bulls) on a 65-acre pasture. The site consists of level cropland overlooking the valley of Big Sandy Creek. The Kafka's live approximately 1 mile south of the site. The purpose of the game farm is to provide breeding stock, meat, and antlers. Occasional fee shooting of elk by the public is also proposed.

The applicants operate a 40-acre elk game farm 1 mile south of the site (FWP Game Farm License No. 622) and a 1,145-acre elk shooting preserve 6 miles to the east (Diamond K Ranch Game Farm). The applicants have also proposed an 869 acre shooting preserve game farm (Diamond K Elk Enterprises Ranch 2) for elk, deer, and other game located immediately south and southwest of the proposed Big Sandy Elk game farm site. If excess bull elk remain at the end of December at the nearby shooting preserves, these elk would be transferred to the proposed game farm site for a three month period. These mature bull elk may be subjected to occasional harvest during winter. Bulls not harvested during the winter would be relocated back to the shooting preserve(s) in late March/early April. The proposed game

farm would also be used to hold adult female elk and their calves on a year-long basis. The maximum of 40 elk is proposed for the game farm.

The applicants would sell and dispose of domestic elk in accordance with Montana game farm and disease control requirements stipulated in Montana statute and administrative rules. Fence construction would be in accordance with requirements of FWP under ARM 12.6.1531. Fencing would consist of 8-foot high, 6-inch mesh game fence supported by wood or steel posts set at least 3 feet into the ground and not more than 24 feet apart. Corner and end posts would be braced. Two proposed exterior gates would be equipped with one latching and at least one locking device. Quarantine and handling facilities would be provided in accordance with Department of Livestock (DoL) requirements.

ALTERNATIVES

One alternative (No Action Alternative) is evaluated in this EA. Under the No Action Alternative, FWP would not issue a license for the Big Sandy Elk Game Farm as proposed. Therefore, no game farm animals would be placed on the proposed game farm area. Implementation of the No Action Alternative would not preclude other activities allowed under local, state and federal laws to take place at the game farm site.

AFFECTED ENVIRONMENT

The proposed Big Sandy Elk Game Farm is surrounded by private property used predominantly for cropland and rangeland, with sparse rural housing. The proposed game farm site is on 65 acres of primarily dry cropland and prairie rangeland that is located on a bench above Big Sandy Creek, in an area known as the Tiger Ridge Gas Field. Topography of the site is generally level to gently sloping. Elevation ranges from about 2,580 to 2,550 feet. One gas well is located within the proposed enclosure. The gas well is plumbed directly into a pipeline collection system, and consists of a well head covered with a small wooden shed. The gas well is maintained about once per month by the gas production company.

Geology of the area is mainly Quaternary-age glacial ground moraines overlying the sandstone, siltstone, and shale of the Cretaceous-age Judith River Formation. The glacial deposits are light-gray clay-rich to sandy or pebbly till containing scattered erratic boulders. Soils on the site are mainly loam to clay loam in texture with a neutral to strongly alkaline reaction. Clay content generally ranges from 10 to 45 percent. Soils are deep (greater than 60 inches thick), well-drained, and have slow to moderately slow permeability. Erosion potential is moderate to high by water and erodible to slightly erodible by wind.

The proposed Big Sandy Elk Game Farm is located immediately adjacent to the steep east slope of Big Sandy Creek. The site is approximately 80 feet higher in elevation than the valley bottom and is currently used for dryland farming. Runoff from the site flows to Big Sandy Creek through one main gully and several smaller gullies which incise the east slope of the valley. There is no surface water at the site, aside from temporary puddles and short reaches of channel flow collecting after precipitation or snow melt events. Water for the elk would be obtained from Big Sandy Creek using water rights owned by the game farm owners (Kafka, 1998). The water would be dispensed from storage tanks to be installed at the site. Big Sandy Creek has a low priority on Montana's Total Maximum Daily Load (TMDL) list.

Two water wells are located within 1 mile of the site. One well is located approximately 0.5 mile north-northeast of the site and is 1,745 feet deep with a static water level at 38 feet below grade. The other well is 211 feet deep with a static water level at 118 feet below grade. Approximately four homes located west of the site in the valley of Big Sandy Creek or on the upland west of the creek reportedly obtain domestic water from the Kremlin municipal water system.

The proposed game farm is comprised of cropland (54.5 acres, 84%) and native rangeland (11.5 acres, 16%). Current use of this site is to grow small grain crops and to pasture cattle following the harvest of the crops. The land surrounding the proposed game farm is cropland except for bottomland along Big Sandy Creek which remain in native vegetation. The riparian zone along Big Sandy Creek contains very little woody vegetation.

Vegetation in uncultivated areas along the edges of the agricultural field is dominated by blue grama, needle-and-thread grass, western wheatgrass, plains muhly, and prairie sandgrass. Native vegetation has been eliminated from the cropland area. Crops planted in the agricultural area include wheat, barley, and oats/peas. Forage production in the native rangeland site is estimated at 750 pounds per acre. Forage production in the cultivated field when used for oat/pea hay averages about 3,000 pounds per acre. Total annual forage production at the proposed game farm site is estimated at 172,125 pounds. Should the cultivated area be planted to perennial introduced vegetation, productivity in the cropland area would likely decline somewhat. There are no federally-listed threatened or endangered plant species expected to occur within the proposed game farm site. The proposed game farm site does contain suitable habitat for noxious weeds such as spotted knapweed, leafy spurge, Canada thistle, and mullein; but these species were not evident during the site inspection.

The proposed game farm site represents low density mule deer, white-tailed deer, and pronghorn antelope habitat. These species use the game farm area on an occasional basis. About once a year, a wild elk or moose is reported to travel along Big Sandy Creek. There are no known migration corridors or critical winter range for any big game species in this area. This area is also used by sharp-tailed grouse, gray partridge, and pheasants. These birds primarily winter in shelter belts near the Kafka ranch headquarters and disperse from this area during early spring. In addition, a small impoundment near the proposed game farm site is used by large numbers of ducks, geese and swans during migratory periods. Some Canada geese and mallards nest in the vicinity of the reservoir during spring. This area could potentially be used by migratory bald eagles, and peregrine falcons, (Federally listed bird species), but there are no known resident threatened or endangered wildlife species.

There are no previously recorded historic or archaeological sites on the proposed game farm; however, several documented sites exist in the immediate vicinity. The absence of cultural properties on the proposed game farm does not mean that they do not exist, but rather may reflect the lack of previous cultural resource inventory.

CONSEQUENCES OF THE PROPOSED ACTION

Impacts to Soil Resources and Vegetation

The Proposed Action plans to place 40 elk in the 65 acre enclosure. Impacts to soil and land resources are expected to be minimal. The major concerns are associated with the relatively high susceptibility to water erosion for each of the different soil types and the high susceptibility of the Hillon soils to wind erosion. The relatively high clay percentages and the relatively slow permeability of the soils can cause gumbo conditions when it rains, which can account for considerable soil erosion when roads and paths are used under these conditions. Maintaining an adequate vegetative cover is integral to reducing potential impacts to soil productivity from both wind and water erosion.

The proposed game farm may have more elk present in the winter than other periods of the year. The annual forage consumption for 40 adult elk would be approximately 160,600 pounds. The proposed game farm site could potentially supply all forage requirements of 40 adult elk. However, forage utilization would

be nearly 100 percent and it would be unlikely that the proposed game farm site could sustain this level of productivity under continuous grazing or in years of below normal precipitation. Supplemental feed should be supplied to the elk from late fall to early spring.

There are no plans to alter the 11 acres of native plants remaining on the proposed game farm site. However, the cropland will be seeded to alfalfa, crested wheatgrass and pubescent wheatgrass to establish a perennial vegetative cover. Areas where elk are fed or handled may lose vegetative cover or fail to develop vegetative cover, but this would be restricted to a small portion of the game farm. The proposed stocking level of 1.6 acres per elk on a year-long basis is relatively high for a dryland range site such as the proposed game farm site.

Although noxious weeds were not apparent at this site, disturbed sites around feeding areas or handling facilities would provide an opportunity for weeds to become established. Weed seeds could potentially be imported into the area with feed for the elk.

Impacts to Water Resources

Increased runoff and erosion could occur in some areas of the game farm if the stocking rate exceeds the carrying capacity of the pasture and vegetative cover is diminished. The proposal to pasture up to 40 elk on the 65 acre site with supplemental feed available could allow adequate vegetative cover to be maintained at the site.

Domestic elk fecal matter and nutrient-enriched water may have a minor effect on the quality of ground water and surface water in the vicinity of the game farm, primarily during periods of snowmelt and major precipitation events. Nutrients in runoff from the site could potentially enter Big Sandy Creek. Using the site as cattle pasture would likely have a similar effect. The two water supply wells identified within 1 mile of the site are in excess of 200 feet deep and are not likely to be affected by the game farm operations.

Impacts to Wildlife Resources

The proposed game farm site is not located within any critical big game winter range, nor is it located along a migration corridor. This specific site receives only occasional use by mule deer, white-tailed deer and pronghorn antelope, and the fencing of 65 acres is not expected to significantly influence deer or antelope in this area. The proposed game farm would not impact any threatened or endangered species. There are no perennial streams or lakes located within the proposed game farm site and there would be no anticipated impacts to aquatic resources.

Wild deer and antelope numbers are very low and habitat is not a limiting factor for these animals. The proposed game farm would not significantly influence the movement of wild deer and pronghorn through this area. The game farm is sufficiently small that deer and antelope can circumnavigate the exterior fence with minimal effort. The loss of 65 acres of cropland/rangeland would not impact the few deer and antelope in the area because this habitat is widely distributed. Wild elk can potentially pass through this area on occasion and could be attracted to the game farm especially during the rut. Bulls fighting through the fence and damaging the fence have been reported elsewhere. The proposed game farm fence would be located primarily on level land and would cross slight slopes (less than 10 degrees) in only two areas.

There would only be minimal opportunity for wild ungulates to enter the game farm because of its small size, excellent characteristic for fencing, and low density of wild deer, antelope and elk. Should deer or other wild ungulates enter the game farm, they would likely be destroyed rather than released back to the

wild. These impacts may affect individuals but not populations. There is very little potential for large predators to pass through this area and be attracted to the elk in the enclosure. Construction of the enclosure would not result in conditions that increase stress to wildlife species living in this area beyond the existing conditions of dryland agriculture.

Risk/Health Hazards

There is a potential for transmission of water-borne disease pathogens, if present, to be transported downstream from the game farm in Big Sandy Creek. However, this risk would be minor because of game farm animal disease testing requirements and because game farm runoff into Big Sandy Creek would occur only during snowmelt or major precipitation events. In addition, water in Big Sandy Creek is not expected to be used directly for human consumption. While water provides a favorable environment for brucellosis, the dilution factor associated with flowing surface water (i.e., Big Sandy Creek during major runoff events) makes it an unlikely means of transmission.

Infectious diseases can potentially be transmitted between game farm elk and domestic livestock. If brucellosis or tuberculosis should occur in the game farm animals, it could potentially be transmitted between different species. Domestic livestock are currently pastured on adjacent croplands and pastureland, and there would be an opportunity for contact between domestic livestock and game farm elk. Chronic wasting disease (CWD) also has been detected in game farm elk, but the mode of transmission is unknown and there is no test for this disease in living animals. CWD has been a known wildlife disease for 30 years in Colorado and Wyoming. There is no evidence of CWD transmission to domestic livestock or humans.

The risk of disease being passed from game farm elk to domestic livestock and wildlife would be minimal if fence integrity is maintained and the stipulations and mitigation measures described in this EA are followed. Potential for disease transmission to domestic livestock and wildlife from game farm animals is also mitigated through DoL disease testing requirements. All animals to be placed on this game farm are required to be tested for tuberculosis at the time of import, purchase and/or transportation to the game farm. A test for brucellosis is also required for all game farm animals that are sold or moved within the state, and is required for all game farm animals imported into Montana. Montana is presently a tuberculosis-free and brucellosis-free state (i.e., these diseases have not been diagnosed in domestic livestock). Each game farm is required to have access to an isolation pen (quarantine facility) on the game farm or approved quarantine plan to isolate any animals that are imported or become ill. The state veterinarian can require additional testing and place herds under strict quarantine should problems arise.

If tuberculosis or brucellosis were to be transmitted from domestic elk and to wild elk and deer, hunters field dressing wild elk or deer would be subject to some risk of infection. Veterinarians and meat cutters working with diseased game farm animals are at risk of becoming infected with brucellosis or tuberculosis. Routine brucellosis and tuberculosis testing requirements for game farm animals offer a measure of surveillance to minimize risk to human health. Failure to comply with these requirements is grounds for license revocation.

Approximately six residences have been identified within 1 mile of the site and are within the average maximum ranges of high-powered big game rifles. In addition, unimproved county roads are located about 1 and 0.5 miles south and east of the game farm, respectively. The residents or motorists could be exposed to an errant bullet. However, gopher and coyote hunting, and target practice at local rifle ranges occur on a year-round basis in this area. Limited hunting for upland game birds and big game also takes place on private and public land in the area. As a result, local residents are accustomed to shooting and hunting in the vicinity.

Cumulative Effects

The Proposed Action would result in potential impacts that are individually minor, but not cumulatively considerable. Cumulative effects from past, present, and reasonably foreseeable activities in all resource areas would be similar to those described for the Proposed Action.

REQUIRED STIPULATIONS AND MITIGATIONS

The following mitigation measure has been included by the game farm applicant as part of the Proposed Action, but is repeated here as a required mitigation because of its importance in reducing potentially significant impacts to below the level of significance:

(1) *Provide escort to anyone entering the game farm enclosure (e.g., gas pipeline personnel) when game farm animals are present.*

The above mitigation is required to mitigate potential risk to wildlife posed by possible escape of game farm elk when persons enter the proposed game farm enclosure. Risk to wildlife from contact between game farm animals and wild game is potentially significant due to the site being located in an area currently utilized by wild game.

(2) *Shooting in the game farm enclosure using high-powered rifles must not occur in the direction of residences located within a 1-mile radius of the game farm. A guide or representative of the ranch familiar with the terrain must accompany each harvester to be sure shooting does not occur toward the nearby residences.*

This stipulation is imposed to mitigate potentially significant risk to public health and safety due to the proximity of residences to the game farm site. The requirement to have a guide with each elk harvester to assure that shooting does not occur in a direction toward the residences would significantly reduce the chances of impacting human health and safety.

RECOMMENDED MITIGATION MEASURES

The following mitigation measures are recommended to address minor impacts identified in the EA that are likely to result from the Proposed Action:

- The moderate to strongly alkaline reaction of the soil should be considered when designing the exterior fence. Uncoated steel posts may corrode with time in these soils.

- Maintain a reasonable stocking rate within the game farm enclosures to minimize changes in soil structure and potential increases in erosion from disturbed ground, and to mitigate potential impacts from runoff and fecal matter.

- Potential water quality impacts could be minimized by disposing dead animals and excess fecal material at a site that is isolated from surface water and groundwater (disposal must meet county regulations for solid waste).

- Dust management activities include spraying water on unpaved roads during the dry season, vegetating exposed ground where possible, protecting fill piles from wind erosion, and limiting ground disturbance to only the area necessary to complete the job.

- Employ the following best management practices (BMPs) to reduce odor problems if they occur: (1) incorporate waste into soil quickly by plowing or discing; (2) spread waste during cool weather or in the morning during warm, dry weather; and (3) properly dispose of animal carcasses. Carcasses should not be disposed of in or adjacent to water bodies, roads, and ditches.

- For any areas that may have erosion and sedimentation problems, utilize BMPs where surface water could enter gullies draining to Big Sandy Creek. The BMPs may include earth berms, straw bale dikes, vegetative buffer zones, and/or silt fences.

- Monitor the proposed game farm site for invasion of noxious weeds and treat affected areas in a timely manner. Coordinate with the County to develop a weed control plan, if necessary.

- Supplemental feed and minerals should be provided to the elk on a seasonal basis to reduce excessive grazing on preferred pasture plants.

- Store hay, feed, and salt away from exterior fences or enclose in buildings.

- Feed game farm animals at interior portions of the enclosure and not along the perimeter fence.

- Inspect exterior game farm fence on a regular basis and immediately after events likely to damage fence to ensure its integrity with respect to trees, frost-heaving, corrosion, burrowing animals, predators, and other game animals.

- If fence integrity or ingress/egress becomes a problem, adjust the fence as necessary, including: double fencing, electrification, additional post support, replacing damaged posts, or increased fence height.

- During winters of exceptional snow cover, remove snow on either side of the perimeter fence to prevent ingress/egress, or keep game farm animals away from fence areas where significant snow buildup occurs.

- Mitigate impacts to cultural resources by stopping work in the area of any observed archeological artifact. Report discovery of historical objects to the Montana Historical Society, Historic Preservation Office. If work stoppage in the area containing observed artifacts is not possible, record the location and position of each object, take pictures and preserve the artifact(s).

SUMMARY OF PUBLIC COMMENTS AND FWP RESPONSES

Public comments for the Big Sandy Elk Game Farm Draft EA were accepted from March 29 through April 19, 1999. FWP received no public comment letters during that time.

CONCLUSION OF THE EA

MEPA and game farm statutes require FWP to conduct an environmental analysis for game farm licensing as described in the Introduction of this Summary. FWP prepares EAs to determine whether a project would have a significant effect on the environment. If FWP determines that a project would have a significant impact that could not be mitigated to less than significant, the FWP would prepare a more detailed EIS before making a decision.

Based on the criteria evaluated in this EA, an EIS would not be required for the Big Sandy Elk Game Farm. The appropriate level of analysis for the Proposed Action is a mitigated EA because all impacts of the Proposed Action have been accurately identified in the EA, and all identified significant impacts would be mitigated to minor or none.

ANALYSIS OF IMPACT ON PRIVATE PROPERTY

Montana game farm statues (87-4-476, MCA) require that game farm licenses may be denied or issued with stipulations to prevent unacceptable threat of escape of captive game farm animals, and to prevent a significant threat to the safety of the general public and surrounding landowners and by the shooting of game farm animals. MEPA requires FWP to identify and analyze environmental impacts of the Proposed Action and potential mitigation measures. MEPA, as revised by Senate Bill 231 of 1995, also requires agencies to evaluate the impact on private property of regulatory actions, such as denial of a permit or establishment of permit conditions (75-1-201, MCA). The Environmental Quality Council (EQC) has established procedural guidelines to implement these requirements. The analysis provided in the Draft EA was prepared in accordance with implementation guidance issued by the EQC.

In addition, the Private Property Assessment Act (2-10-101, MCA, *et seq.*) requires agencies to determine whether proposed actions by the State of Montana have "taking or damaging implications", such as to constitute a deprivation of private property in violation of the United States or Montana constitutions and, if so, to perform an impact assessment to determine the likelihood that a state or federal court would hold that the action is a taking or damaging, to review alternatives, and to determine the estimated cost of compensation. In accordance with the Act, the attorney general has prepared guidelines, including a checklist, to assist agencies in identifying and evaluating actions with taking or damaging implications.

The Draft EA contains FWP's completed checklist with respect to the required stipulations and mitigations, and has found that the preferred alternative does not have taking or damaging implications and that an impact assessment is not required.

PERSONS RESPONSIBLE FOR PREPARING THE EA

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